DOCUMENT RESUME

ED 199 763 CS 206 229

AUTHOR Pearsall, Thomas E.
TITLE The State of Technical Writing.
PUB DATE Feb 81
NOTE 9p.; Paper presented at the Annual Meeting of the Midwest Regional Conference on English in the Two-Year College (16th, Minneapolis, MN, February 19-21, 1981).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS College Curriculum; *Educational Change; English Curriculum; Higher Education; Social Change; Social Influences; *Technical Writing; *Writing Instruction; Writing Skills

ABSTRACT

The number of college students in technical writing classes has grown at least tenfold since 1969. This dramatic increase has occurred partly because of the practicality and power inherent in technical writing and partly because of the increased need for technical writing skills by people in today's change workforce. As developed countries shift from being industrial societies to being information societies, the efficient and effective transfer of information becomes a necessity. The increased need for technical writing skills also comes at a time when, paradoxically, literacy is more needed and less apparent in young people. Based on these observations, it appears that technical writing has broadened in scope to the point that it may be interchangeable with James Britton's term "transactional writing." The dramatic development of technical writing as a discipline of study also offers many opportunities for technical writing teachers, including their increased community involvement and their organization of college majors and minors in the study of technical writing. (RL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED199763

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Thomas E. Pearsall

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

The State of Technical Writing

by
Thomas E. Pearsall
Professor and Head
Department of Rhetoric
University of Minnesota
St. Paul, Minnesota

Let me begin by saying that I don't think technical writing has arrived at a completed identity. In fact, I sincerely hope not. Things that are completed are frequently dead. Things that are too well defined may become ritualistic and inflexible. Such, I trust, is not the case with technical writing.

Certainly technical writing has grown. Exact figures are hard to come by, but I can give you some indicators. At the present time 4 summer workshops in teaching technical writing enroll over 100 students a year. Ten years ago such workshops didn't even exist. Private publisher's information available to me indicates that since 1969 the number of technical writing textbooks sold annually has increased over ten-fold, from about 25,000 a year to well over a quarter million. Another indicator is the growth of the Association of Teachers of Technical Writing from a nucleus of about 10 charter members in 1972 to an organization with now nearly a thousand members. All the indicators then point to a rather amazing growth. As a not disinterested or uninterested party to all this growth I might point out that new texts in the field have proliferated. Put two texts together on a dark shelf and in several weeks you have a dozen more. Before I'm fool enough to attempt an answer to the question, "Where is all this going to lead?" let me try to answer the question of why we have come so far so fast.

The first part of an answer to that question lies in the nature of technical writing itself. One does not have to read many articles by teachers of technical writing or listen to their conversations very long to discover a rather strange and wonderful phenomenon. Most of them approached the teaching of technical writing for the first time with reluctance and even fear and trembling. Some were even forced into it. But once into teaching it, before their eyes, technical writing metamorphosed from a caterpillar to a butterfly. They report that they enjoy teaching it. They see value in it. Their students--who most often approached the course with the same fear and reluctance as their teachers--report in class evaluations that they see great value in the course; some even report enjoying it. Strange words like dipole, plate tectonics, and double helix begin crossing the teachers' lips. They discover magazines like Motor, Popular Photography, Popular Mechanics, Stereo Review, Science, and Scientific American. They begin saving the instructions that come with items they buy in the hardware store. They discover the world of business and government reports. Most seem to discover Robert Persig's Zen and the Art of Motorcycle Maintenance, a book that ties together for them their

CS206229

humanistic world with the technological and scientific one. Most womderful of all, they become apostles back to their colleagues, who now seem to them to be sitting in a cave staring at shadows and illusions.[1]

Why this phenomenon? I suggest that one answer is the nature of technical writing itself. If there is one thing that all technical writing practitioners and teachers can agree upon, it's that technical writing makes things happen. As Professor Thomas L. Warren put it, "The purpose of any piece of technical writing is to inform so the reader can act. . . ."[2] Certainly, there is a sense of both practicality and power in technical writing. Technical writing is practical because it is situational. It always addresses itself to a particular purpose and audience. Technical writing is powerful because it makes things happen. Machines, factories, and ships get built because of it. If our energy crisis and environmental problems are one day resolved, it will be because the solutions were set down in technical writing. Old scientific theories fall before newly published scientific theories. Students and teachers alike enjoy the power and breathe a sigh of relief at technical writing's rational practicality.

Teachers and students also see technical writing courses as being worthwhile because--like tennis and unlike football--they have high carryover value beyond the college days. A survey conducted by Professor Richard M. Davis among persons listed in Engineers of Distinction led him to the following facts and conclusions:

- The respondents spent an average of 24.35% of their time writing.
- The respondents spent 31% of their time working with other peoples' written materials.
- Most of the respondents felt that the ability to write effectively is either very important or of critical importance to them.
- Almost all report that as their responsibility increased, so did their need to write.
- Almost all felt that the ability to write well had contributed to their advancement.
- In advancing subordinates, almost all considered their writing ability.[3]

Surveys like Dick Davis' provide direct evidence to the need for technical writing. There is much other such direct evidence. For example, advisory groups to both our forestry and agriculture colleges have told them that, to quote from the forestry group, "Graduates need to be able

to communicate better with workers, supervisors, and the general public, both orally and in writing. They also need better reading skills to improve speed and understanding of the content."

But, there is evidence of the need that is more subtle and yet more powerful than the direct evidence. A few months ago, I had the good fortune to come across a speech by John Naisbitt, Senior Vice President of a research and consulting group ecuminically named Yankelovich, Skelly and White. The talk, delivered in Stockholm, Sweden, was called "The New Economic and Political Order of the 1980's." In his talk, Mr. Naisbitt had a thesis of great importance to us. He saw five significant trends in the United States and to some degree in all developed countries, the first of which is that we're rapidly shifting "from a mass industrial society to an information society." In Mr. Naisbitt's words, "The final impact will be more profound than the 19th Century shift from an agricultural to an industrial society."

A few supporting facts from his talk:

In 1950, 65% of our work force were in industry. That percentage now stands at 30%.

In 1950, the number of people in information occupations was 17%; today the figure is over 55%.

Mr. Naisbitt defines information occupations as "those involved in the creating, processing, and distribution of information, including banks, stock markets, insurance companies, education, and government."

In 1979, clerks became the largest occupational group in the United States. Before that it had been laborers, and before that farmers.

This leads to other shifts. For example, the major resource for the entrepeneur in the past has been capital. Now it may be knowledge and data. If we look closely we see small firms springing up all around us, many based on some form of micro-computer technology, itself a part of the information explosion. These small firms have as their major resource the information in the heads of the young people who found them rather than money.

Because information about new technology has become so vital, a lack of information can be as harmful as a lack of machine tools. Recently, a computer firm in the Twin Cities halted production on several of its new models because the needed user information for them had not yet been produced.

We suffer from information overload. A young technician from the same company told me that he felt he was at the bottom of a 500-foot shaft with people pouring facts down on top of him.

I suspect some of you have noticed a strange paradox underlying what I'm telling you. As we move into Mr. Naisbitt's information society, literacy in our young is an increasingly important attribute, and yet testing and our own experience seem to indicate that literacy in the young is decreasing.

Since 1962, research in this country has verified that the verbal skills of college-bound students have declined. In 1976/77, the College Entrance Examination Board funded a blue-ribbon panel to examine the evidence and report on possible reasons for the trend. In addition to describing possible reasons, the panel also verified that over the past 20 years, the validity of the SAT verbal skills test had increased slightly despite the reduction in score averages. Therefore, it seems that the problem is real on a national level, and that the best evidence supports the hypothesis that our students are less proficient in writing and other verbal skills than before. In 1951, the mean SAT verbal score for all candidates was 476. In 1962, the mean score was 478; by 1977 it was 429. The evidence of the past two decades also shows that students who claim to be headed for technical colleges consistently score 100 points lower on the SAT 200-800 point scale than do students bound for liberal arts colleges.

So to summarize at midpoint. Technical writing has grown, partly because of its own practical and active nature and partly because of a need for such courses, a need that in some quarters, at least, is seen as so profound as to signal a change in our very economic and cultural foundations. As an important footnote, we see that as the need for literacy increases, the supply of literacy decreases. What does this mean for the future? Three things: I suspect it means more growth, more change, and more opportunities.

The demand for technical writing classes similar to the ones we currently teach will accelerate. That our courses fill the needs I have described seems self evident to us. Others are beginning to reach the same conclusion. The Document Design Project, funded by the National Institute of Education, has been set up in Washington to improve the knowledge and skills of people who produce public documents (the very project is a sign of the times). After an investigation of writing course work in our nation's colleges and universities, the project decided that "In looking for curricula that teach document design skills, we found that technical writing courses come closest to the model we are seeking. Technical writing courses focus on job-related communication skills, on awareness of audience and purpose, and on the need to be clear, concise, and technically accurate."[4]

The College of Liberal Arts at my own institution has recently voted to forego a required quarter of freshman communication in order to add a required junior writing course. It seems likely that technical writing will be an important component of the approach they embrace.

More growth, then, even accelerated growth, seems self evident to me. With growth will come change; indeed, much has come already. I have a

fairly extensive collection of technical writing texts. Preparing for this talk I thumbed through some of their tables of contents and the change in emphasis from the early 50's to now was striking. Here are some of the headings from a popular early 50's text that is still with us, now in a 4th edition.

Style in Technical Writing
Definitions
Outlines and Abstracts
Description of a Mechanism
Description of a Process
The Progress Report
Recommendation Reports
Proposals
Oral Reports
Letters
Graphic Aids

Here are some of the chapter headings from a 1980's book.

Preliminary Considerations
Planning the Presentation
Five Technical Modes
Process and Instructions
Writing the Paper
Revising and Polishing
Preparing and Using Illustrations
Part II, Applications
Correspondence
Reports
Special Applications, which includes proposals, specifications, and several others
Daily Informal Communication
Handbook

The change is obvious. The older book is product oriented. The newer book still has a healthy amount of product but process now plays an important role. The texts both lead and reflect what is going on in the classroom.

Part of this change has been caused by the change in audience in our classrooms as technical writing broke out of the engineering cloister. I suspect no one knows that better than you. A list of majors in his classrooms prepared by Roy McGalliard of Western Community College included the following: nursing, business administration, real estate, insurance, police science, fire science, mental health associate, medical laboratory technology, industrial engineering and drafting. With such a diverse audience, we have found it impossible to find products to suit them all. We have turned to process in self defense.

But the more significant reason for the change is, I suspect, once again the underlying nature of technical writing itself, if I can return to that for a moment. W. Keats Sparrow once said that Technical writing was an exciting course for the writing teacher because it was the purest writing course. That is, in it the discussion was about writing, not as sometimes is, or was true, in freshman comp about who killed King Kong or what's wrong with America. And, my word, this is true in and out of the classroom. Technical writing teachers as a breed are obsessed with the subject. Teachers of Victorian Lit don't talk about Matthew Arnold and Tennyson all the time, but teachers of technical writing rarely get away from their subject.

Because of this intense interest, technical writing is, in a sense, self-correcting. In 1969, I wrote, as far as I know, the first textbook attempt to deal with audience analysis in technical writing. In 1979 a young man complained in an article in the Technical Writing Teacher, that although most technical writing texts emphasize audience analysis in an early chapter, they don't follow up on it. The complaint is a legitimate one, as a matter of fact, but in ten short years I feel like the ancient mariner, but with a new cry, that of, "But we've come a long way, Baby."

I suspect also that many feel that the change from product emphasis to process emphasis has been forced on teachers of technical writing from the outside. I would argue otherwise--that the change was inevitable in the nature of technical writing. It was technical writing, after all, that rescued audience analysis back from the speech department. It was technical writing that emphasized purpose on writing in a way that few other composition courses did. Once given the notion that technical writing was a way of shaping information to purpose and audience, it had to follow that the shaping would be seen and taught as a rational process. It's no accident, I think, that one of the best of the new process-oriented general-purpose composition texts, Problem Solving Strategies for Writing was written by Linda Flowers from Carnegie Mellon where technical writing has long been taught. So we are correcting not only ourselves, but others as well.

So much change has occurred that I'm really not sure anymore that what we teach can rightfully be called technical writing. We may go on calling it that out of habit and convenience. The more appropriate term may be transactional writing--coined, I believe, by James Britton. Transactional writing is that writing with which we carry on the transactions of the world's work, whether that work be technical, scientific, or whatever. Growth and change. Let me give you a few notions about the opportunities.

Technical writing offers many opportunities for community involvement. One is right close to home in your own college community. We have begun to realize that teachers of writing can't do the whole job alone. We have to bring in our colleagues from other disciplines. I'm talking, of course, about writing across the curriculum. Those of us in technical writing with our knowledge of other disciplines and our network of friends in other disciplines are natural leaders in the movement.

You can get involved with your community to see what other kinds of writing and communication courses they need beyond the basic ones. Clearly, there is room and justification for additional technical writing courses in the curriculum. Examples are courses in writing for publication, report and thesis writing, editing, production, technology assessment, and proposals.

As you add such courses you can build a minor in technical writing or even a major. A recent survey in our Institute showed that well over 90% of the advisers in other disciplines would support a technical communication minor and see it as an important addition to their students' education. Those of us with technical communication majors can tell you of the demand for our students. Recruiters come to our Midwest campus from both coasts.

As a representative of Bell and Howell recruiting told me, "We see a continuing growth in our need for information specialists"--Mr. Naisbitt's thesis once again in operation. One large firm has recently contracted with Rensselaer Polytechnic Institute to set up a masters degree program in technical communication specifically for its technical writers.

You can get involved statewide with plain language laws. Some 45 states have passed plain language laws for insurance, but only 5 have passed laws for plain language in contracts. You can get involved in consulting for learning, fun and profit. If you do, you must know as do most teachers of technical writing that good communication in the world of work is more than good mechanics, or even good style, audience analysis, and organization. Sometimes it's finding blocked channels of communication and opening them.

So, no, I don't really think technical writing has a completed identity. Very likely the true identity is just beginning to emerge. When it does, it may be very different from anything you and I suspect, and perhaps much better and exciting.

Notes

1. For example, see Professor Fred H. MacIntosh's "Teaching Writing for the World's Work," Teaching English in the Two-Year College 2, no. 1 (1975): 7-14.

2. "Style in Technical Writing," The Technical Writing Teacher 6, no. 2 (1979): 49.

3. "How Important is Technical Writing?--A Survey of the Opinions of Successful Engineers," The Technical Writing Teacher 4, no. 3 (1977): 83-88.

4. Janice C. Redish and Kathryn Racette, Teaching College Students How To Write: Training Opportunities for Document Designers. Washington, D. C.: Document Design Project, 1979, p. 20.